# Fast Cyclic Redundancy Checking (CRC) G n ration

## ABSTRACT OF THE DISCLOSURE

5　　　　A CRC generation unit includes a number of CRC calculation assemblies to be selectively employed to incrementally calculate a CRC value for a first sequence of N data bytes.  The calculation is iteratively performed, one iteration at a time.  Further, the selection of the CRC calculation assemblies is made in accordance with the group size of each of a number of data word groups of the N data bytes.  In one

10　　embodiment, the CRC calculation assemblies include a first assembly for incrementally calculate the CRC value for an iteration, whenever the group size is n/2 bytes or less for the iteration, and a second assembly for incrementally calculate the CRC value for an iteration, whenever the group size is more than n/2 bytes for the iteration.  In one embodiment, the CRC generation unit is a shared resource to

15　　multiple network traffic flow processing units of a network traffic routing IC.